

**Supplemental
Notice of Allowability**

Application No.

10/567,735

Examiner

NANCY BITAR

Applicant(s)

IZQUIERDO, EBROUL

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/8/2008.
2. ☒ The allowed claim(s) is/are 1,2,5,7-11,13-15,17-20,22 and 23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 9/8/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20081230.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Nancy Bitar/
Examiner, Art Unit 2624

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) dated 9/8/2008 has been considered by the examiner.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Valerie Davis on 06/30/2008.

The application has been amended as follows:

Please amend the specification on page 5 lines 1-10

In a second aspect, the present invention provides a method of verifying a fragile watermark ~~[as claimed in claim 20]~~.

In a third aspect, the present invention provides apparatus for fragile watermarking ~~[as claimed in claim 24]~~.

In a fourth aspect, the present invention provides apparatus for verifying a fragile watermark ~~[as claimed in claim 25]~~.

Please amend claim 10:

In claim 10, line 1, please delete the word "claim 3" and insert "claim 1" before "wherein"

Allowable Subject Matter

3. Claims 1-2, 5, 7-11, 13-15, 17-20, and 22-23.

The following is an examiner statement of reasons for allowance: After reviewing the remarks made by applicant in response to the non-final office action and amending the claims to incorporate the subject matter allowable in the first office action, the examiner finds the remarks persuasive. Chandra et al (SVD based approach to transparent embedding data into digital images) teaches embedding a bit of data through slight modifications of SVs of a small block of the segmented covers. , the size of small Blocks is used as an attribute to achieve a tradeoff between the embedded data rate and robustness wherein the condition number of the operator increases by increasing the value of the largest singular value (see figure 1 and paragraph 2.1). Wong et al (A public key watermark for image verification and authentication) teaches embedding a digital signature extracted from the most significant bits of a block of the image into the least significant bit of the pixels in the same block. None teaches "generating at least a first ill-conditioned operator, said ill conditioned operator being related to values extracted from an image or portion thereof A; and replacing a non-zero singular value of a singular value matrix SA of an image or portion thereof A, with a

solution to a linear equation comprising the ill-conditioned operator, wherein the non-zero singular value to be replaced is the smallest non-zero singular value $S(A)$ in a singular value matrix SA , of rank r ". The Examiner finds no reason or motivation to combine the above references in an obviousness rejection thus placing the application in condition for allowance.

4. Any comments considered necessary by applicant must be submitted on later than the payment of the issue fee and to avoid processing delays should preferably accompany the issue fee. Such submissions should be clearly labeled, comments on statement of reasons for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

/Nancy Bitar/
Examiner, Art Unit 2624